OM protein - protein search, using sw model

Run on: June 23, 2003, 08:23:26 ; Search time 90.974 Seconds
(without alignments)
269.507 Million cell updates/sec

Title: US-10-077-137-1
Perfect score: 964
Sequence: 1 MLQMAGQCSQNEYFDSLLHA.....CKSLPAALSATEIEKSISAR 184

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 908470 seqs, 133250620 residues

Total number of hits satisfying chosen parameters: 908470

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_101002:*
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21: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:*
22: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:*
23: /SIDS2/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	964	100.0	184	21	AAB08843	Amino acid sequenc
2	964	100.0	184	21	AAY94001	A human BCMA prote
3	964	100.0	184	22	AAE09241	Human BCMA protein
4	964	100.0	184	22	AAE00506	Human B cell matur
5	964	100.0	184	22	AAB60698	Human BAFF recepto
6	964	100.0	184	22	AAY71979	Human B cell matur
7	964	100.0	184	23	ABB81487	Human BCMA recepto
8	950	98.5	181	23	AAE15484	Human B-cell matur
9	719.5	74.6	157	22	AAB60700	Human BAFF recepto
10	572	59.3	185	21	AAB08844	Amino acid sequenc
11	572	59.3	185	22	AAY71980	Murine B cell matu
12	572	59.3	185	23	AAE15490	Mouse B cell matur
13	323	33.5	58	23	AAE15501	Human B cell matur
14	311.5	32.3	117	23	AAE15491	Human-murine B cel
15	286.5	29.7	302	22	AAE00507	Human BCMA-Immunog
16	286.5	29.7	302	22	AAB60699	Mouse IgG signal/h
17	286	29.7	283	23	AAE15488	Human BCMA-immunog
18	284	29.5	51	23	AAE15485	Human B-cell matur
19	201	20.9	34	23	AAE15486	Human B-cell matur
20	187	19.4	281	23	AAE15489	Mouse BCMA-human i
21	116.5	12.1	175	23	ABB81489	Mouse Ztnfr12 prot
22	116.5	12.1	175	23	AAE22244	Murine BAFF recept
23	106.5	11.0	185	23	AAE22266	Human BAFF recepto
24	105.5	10.9	185	23	AAE22267	Human BAFF recepto
25	104	10.8	21	23	AAE15487	Human B-cell matur
26	103.5	10.7	185	23	AAE22269	Human BAFF recepto
27	100.5	10.4	185	23	AAE22271	Human BAFF recepto
28	99.5	10.3	185	23	AAE22268	Human BAFF recepto
29	97.5	10.1	185	23	AAE22270	Human BAFF recepto
30	94.5	9.8	185	23	AAE22242	Human mature JST57
31	93	9.6	184	23	ABB81483	Human Ztnfr12 prot
32	93	9.6	266	23	AAE22243	Human JST576 (BAFF
33	90.5	9.4	24	23	AAE15492	Human-murine BCMA
34	83.5	8.7	404	23	AAO14136	Protein of a compl
35	82	8.5	1009	19	AAW61196	Mouse protein tyro
36	82	8.5	1009	19	AAW64568	Murine protein tyr
37	82	8.5	1009	19	AAW48374	Mouse related adhe
38	81	8.4	576	20	AAY23925	Amino acid sequenc
39	79.5	8.2	293	23	AAU09900	Human AGP-3 relate
40	79.5	8.2	1009	17	AAR98351	Probin tyrosine ki
41	79.5	8.2	1009	19	AAW57891	Human PYK-2 protei
42	79.5	8.2	1009	19	AAW48373	Human related adhe
43	79	8.2	857	13	AAR29814	S receptor kinase
44	78.5	8.1	265	22	AAE09244	Human TACI splice
45	78.5	8.1	293	19	AAW75783	Human lymphocyte s

ALIGNMENTS

RESULT 1
AAB08843
ID AAB08843 standard; peptide; 184 AA.
XX
AC AAB08843;
XX
DT 02-JAN-2001 (first entry)
XX
DE Amino acid sequence of human.
XX
KW BCMA; necrosis factor-kB activator; NF-kB; gene expression; cancer;
KW anti-cell death gene; apoptosis; viral infection; inflammatory response;
KW rheumatoid arthritis; inflammatory bowel disease; septic shock.
XX
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Domain 57..77
FT /note= "putative transmembrane domain"
XX
PN WO200050633-A1.
XX
PD 31-AUG-2000.
XX
PF 24-FEB-2000; 2000WO-US04925.
XX
PR 24-FEB-1999; 99US-0121485.
XX
PA (GEHO) GEN HOSPITAL CORP.
XX
PI Seed B, Ting A;
XX
DR WPI; 2000-558405/51.

XX
PT Identifying a modulator of gene expression for drug designing, by
PT contacting a compound library with a cell expressing an anti-cell death
PT gene and reporter gene, and determining alteration in reporter gene
PT expression -
XX
PS Claim 32; Fig 7A; 53pp; English.
XX
CC The present sequence represents a BCMA (not defined) polypeptide. BCMA
CC is a necrosis factor (NF)-kB activator. The method of the invention is
CC used to identify compounds which modulate BCMA activity (and thus NF-kB
CC activity). The specification describes a method of identifying a
CC polypeptide which increases gene expression from a promoter. The method
CC involves contacting a library of with a cell which expresses a
CC recombinant anti-cell death gene and a reporter gene operably linked to
CC the promoter, and then determining whether the expression of the
CC reporter gene is altered as a result of contact with library. The method
CC is useful for identifying polypeptides which increase or decrease gene
CC expression from a promoter. The BCMA polypeptide or nucleic acid are
CC useful for preparing a pharmaceutical composition for treating cancer,
CC apoptosis, viral infections, inflammatory response, such as rheumatoid
CC arthritis, inflammatory bowel disease or septic shock. BCMA is useful for
CC identifying compounds that modulate NF-kB expression and thus for drug
CC designing.
XX
SQ Sequence 184 AA;

Query Match 100.0%; Score 964; DB 21; Length 184;
Best Local Similarity 100.0%; Pred. No. 1.3e-95;
Matches 184; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
Db 1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy 61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
Db 61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy 121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
Db 121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy 181 ISAR 184
Db 181 ISAR 184

ULT 2
94001
AAY94001 standard; Protein; 184 AA.
XX
AC AAY94001;
XX
DT 20-OCT-2000 (first entry)
XX
DE A human BCMA protein, a B cell protein related to TACI.
XX
KW Human; BR43x2; TACI receptor; extracellular domain; BCMA; B cell protein;
KW transmembrane activator and CAML-interactor; tumour necrosis factor; TNF;
KW ztnf4 activity; antibody production; autoimmune disease; amyloidosis;
KW systemic lupus erythematosus; myasthenia gravis; multiple sclerosis;
KW rheumatoid arthritis; asthma; bronchitis; emphysema; pyelonephritis;
KW end stage renal failure; glomerulonephritis; vasculitis; nephritis;
KW renal neoplasm; multiple myeloma; lymphoma; light chain neuropathy;
KW immune response; immunosuppression; graft rejection; joint pain;
KW graft versus host disease; inflammation; swelling; anaemia; septic shock;
KW insulin dependent diabetes mellitus; Crohn's disease; hypertension;
KW renal artery stenosis; occlusion; cholesterol; renal emboli.
XX
OS Homo sapiens.
XX
PN WO200040716-A2.
XX
PD 13-JUL-2000.
XX
PF 07-JAN-2000; 2000WO-US00396.
XX
PR 07-JAN-1999; 99US-0226533.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Gross JA, Xu W, Madden K, Yee DP;
XX
DR WPI; 2000-452538/39.
DR N-PSDB; AAA58559.
XX
PT Inhibiting ztnf4 activity in a mammal, to treat autoimmune diseases,
PT renal disease, graft versus host disease, and inflammation, comprises
PT administering a BR43x2, TACI or BCMA extracellular domain polypeptide -
XX
PS Disclosure; Page 152; 175pp; English.
XX
CC The present sequence represents a human BCMA protein, a B cell protein
CC related to transmembrane activator and CAML-interactor (TACI) receptor.
CC TACI is a tumour necrosis factor (TNF) receptor. The extracellular
CC domains of BR43x2 (an isoform of TACI), TACI or BCMA (a related B cell
CC protein) receptor contain a cysteine rich domain, and are used for
CC inhibiting ztnf4 activity. Ztnf4 is a TNF ligand. They may also be used
CC for inhibiting BR43x2, TACI or BCMA receptor-ligand engagement associated
CC with activated or resting B lymphocytes, effector T-cells, or with
CC antibody production. The antibody production is associated with an
CC autoimmune disease selected from systemic lupus erythematosus, myasthenia
CC gravis, multiple sclerosis and rheumatoid arthritis. The ztnf4 activity
CC and BR43x2, TACI or BCMA receptor-ligand engagement is associated with
CC asthma, bronchitis, emphysema, end stage renal failure,
CC glomerulonephritis, vasculitis, nephritis, pyelonephritis, renal
CC neoplasms, multiple myelomas, lymphomas, light chain neuropathy,
CC amyloidosis, moderating immune response, immunosuppression, graft
CC rejection, graft versus host disease, inflammation, insulin dependent
CC diabetes mellitus, Crohn's disease, joint pain, swelling, anaemia, or
CC septic shock. BR43x2, TACI, and BCMA polypeptides, fusions, antibodies,
CC agonists or antagonists can be used to treat hypertension, renal artery
CC stenosis, or occlusion, and cholesterol or renal emboli.
XX
SQ Sequence 184 AA;

Query Match 100.0%; Score 964; DB 21; Length 184;
Best Local Similarity 100.0%; Pred. No. 1.3e-95;
Matches 184; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
Db 1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy 61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
Db 61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy 121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
Db 121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy 181 ISAR 184
Db 181 ISAR 184

RESULT 3
AAE09241
ID AAE09241 standard; Protein; 184 AA.
XX
AC AAE09241;
XX
DT 19-NOV-2001 (first entry)
XX

```
DE   Human BCMA protein.
XX
KW   Human; TNF; tumour necrosis factor; TALL-1; APRIL; TNF receptor;
KW   TNFR; TACI; BCMA; therapy; cancer; leukaemia; myeloma; lymphoma;
KW   autoimmune disease; rheumatoid arthritis; multiple sclerosis;
KW   psoriasis.
XX
OS   Homo sapiens.
XX
PN   WO200160397-A1.
XX
PD   23-AUG-2001.
XX
PF   28-NOV-2000; 2000WO-US32378.
XX
PR   16-FEB-2000; 2000US-0182938.
PR   22-AUG-2000; 2000US-0226986.
XX
PA   (GETH ) GENENTECH INC.

     Ashkenazi AJ, Dodge KH, Grewal I, Kim KJ, Marsters SA, Pitti RM;
     Yan M;
XX
DR   WPI; 2001-541628/60.
DR   N-PSDB; AAD15902.
XX
PT   Inhibiting or neutralizing TALL-1 or APRIL polypeptide biological
PT   activity, for treating autoimmune disorders and cancer, comprises
PT   exposing the cells to TALL-1 or APRIL polypeptide agonists or
PT   antagonists -
XX
PS   Example 2; Fig 2; 160pp; English.
XX
CC   The invention relates to methods of using one or more agonists or
CC   antagonists to modulate the activity of the members of TNF (tumour
CC   necrosis factor) especially TALL-1, APRIL and TNF receptor (TNFR)
CC   e.g. TACI or BCMA. The method is useful for treating pathological
CC   conditions or diseases associated with increased TALL-1 and APRIL
CC   expression or activity. TALL-1 and APRIL antagonists are used to
CC   block the interaction between APRIL and TALL-1 with TACI or BCMA.
CC   They are useful for treating a mammal suffering from cancer such
CC   as leukaemia, lymphoma, myeloma, cancers of lung and colon and
CC   autoimmune diseases e.g. rheumatoid arthritis, multiple sclerosis,
CC   psoriasis and lupus erythematosus. The present sequence is human
CC   BCMA protein.
XX
SQ   Sequence   184 AA;

  Query Match            100.0%;  Score 964;  DB 22;  Length 184;
  Best Local Similarity  100.0%;  Pred. No. 1.3e-95;
  Matches  184;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy        181 ISAR 184
              ||||
Db        181 ISAR 184


RESULT 4
AAE00506
ID   AAE00506 standard; Protein; 184 AA.
XX
AC   AAE00506;
XX
DT   31-JUL-2001  (first entry)
XX
DE   Human B cell maturation protein (BCMA).
XX
KW   Human; A Proliferation Inducing Ligand Receptor; APRIL-R; cytostatic;
KW   gene therapy; cancer; nephrotropic; renal disorder; autoimmune disease;
KW   carcinoma; lung; colon; breast; prostate; Grave's disease; hypertension;
KW   systemic lupus erythematosus; SLE; inflammation; cardiovascular disease;
KW   B-cell lympho-proliferative disorder; BCM; immunosuppressive disease;
KW   organ transplantation; HIV; human immunodeficiency virus; TNF;
KW   tumour necrosis factor; BCMA; B cell maturation protein.
XX
OS   Homo sapiens.
XX
PN   WO200124811-A1.
XX
PD   12-APR-2001.
XX
PF   05-OCT-2000; 2000WO-US27579.
XX
PR   06-OCT-1999;  99US-0157933.
PR   11-FEB-2000; 2000US-0181807.
PR   30-JUN-2000; 2000US-0215688.
XX
PA   (BIOJ ) BIOGEN INC.
PA   (APOT-) APOTECH R & D SA.
XX
PI   Schneider P, Thompson J, Cachero T, Ambrose C, Rennert P;
XX
DR   WPI; 2001-266242/27.
DR   N-PSDB; AAD03844.
XX
PT   Treating a mammal for a condition associated with undesired cell
PT   proliferation such as cancer or carcinoma, comprises administering a
PT   composition comprising A Proliferation Inducing Ligand Receptor
PT   (APRIL-R) antagonist -
XX
PS   Claim 3; Fig 3A; 85pp; English.
XX
CC   The invention relates to a method of treating a mammal for a condition
CC   associated with undesired cell proliferation such as cancer or
CC   carcinoma. The method involves administering a composition comprising
CC   A Proliferation Inducing Ligand Receptor (APRIL-R) also referred as
CC   B cell maturation protein (BCM or BCMA) antagonist that antagonises the
CC   interaction between APRIL and its cognate receptor(s). This method is
CC   useful for treating undesired cell proliferation such as cancer or
CC   carcinoma e.g. human lung carcinoma, colon carcinoma, breast carcinoma,
CC   prostate carcinoma, and other carcinomas whose proliferation is modulated
CC   by APRIL. It is also useful for treating autoimmune diseases (Grave's
CC   disease, systemic lupus erythematosus-SLE); hypertension, cardiovascular
CC   diseases, renal disorders, B-cell lympho-proliferative disorders,
CC   immunosuppressive diseases, organ transplantation, inflammation and
CC   human immunodeficiency virus (HIV), and for treating, suppressing or
CC   altering an immune response involving a signalling pathway between
CC   APRIL-R and its ligand. APRIL-R DNA is also useful in gene therapy.
CC   The present sequence is human APRIL-R also referred as BCMA or
CC   BCM protein.
XX
SQ   Sequence   184 AA;

  Query Match            100.0%;  Score 964;  DB 22;  Length 184;
  Best Local Similarity  100.0%;  Pred. No. 1.3e-95;
  Matches  184;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
```

```
Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy        181 ISAR 184
              ||||
Db        181 ISAR 184


RESULT 5
AAB60698
ID   AAB60698 standard; Protein; 184 AA.
XX
AC   AAB60698;
XX
DT   22-MAY-2001  (first entry)
XX
DE   Human BAFF receptor (BAFF-R).

     Human BAFF-R; BAFF receptor; TNF family; immunoregulatory agent;
     immune-related disorder; B-cell growth inhibitor; BCMA;
KW   B-cell maturation inhibitor; immunoglobulin production inhibitor;
KW   autoimmune disorder; B-cell lymphoproliferative disorder; hypertension;
KW   renal disorder; immunosuppressive disorder; HIV infection;
KW   organ transplantation; antiinflammatory; systemic lupus erythematosus;
KW   autoimmune haemolytic anaemia; Grave's disease; multiple myeloma;
KW   B-cell carcinoma; leukaemia; rapidly progressive glomerulonephritis;
KW   lymphoma; gene therapy; cancer; tumour.
XX
OS   Homo sapiens.
XX
PN   WO200112812-A2.
XX
PD   22-FEB-2001.
XX
PF   16-AUG-2000; 2000WO-US22507.
XX
PR   17-AUG-1999;   99US-0149378.
PR   11-FEB-2000; 2000US-0181684.
PR   18-FEB-2000; 2000US-0183536.
XX
PA   (BIOJ ) BIOGEN INC.
PA   (APOT-) APOTECH R & D SA.
XX
PI   MacKay F,  Browning J,  Ambrose C,  Tschopp J,  Schneider P;
PI   Thompson J;
XX
DR   WPI; 2001-202866/20.
DR   N-PSDB; AAF59998.
XX
PT   Inhibiting dendritic cell-induced B-cell growth, maturation and B-cell
PT   lympho-proliferative disorder by administering BAFF-receptor
PT   polypeptide, chimeric molecule comprising receptor or anti-BAFF-R
PT   antibody homolog -
XX
PS   Claim 20; Fig 1; 59pp; English.
XX
CC   The invention relates to the use of a BAFF receptor (BAFF-R, also known
CC   as BCMA) protein, or a BAFF-R fusion protein as an agent for the
CC   treatment of a variety of immune-related disorders. BAFF-R is a member of
CC   the TNF (tumour necrosis factor) family, acting as an immunoregulatory
CC   agent, and also plays a role in the development of hypertension and
CC   related disorders. BAFF-R, fusion proteins containing it, and BAFF-R-
CC   specific antibodies can be used for inhibiting B-cell growth, dendritic
CC   cell-induced B-cell growth and maturation, and immunoglobulin production,
CC   and in the treatment of autoimmune disorders, B-cell lymphoproliferative
CC   disorders, hypertension and renal disorders. The BAFF-R proteins may also
CC   be used in the treatment of immunosuppressive disorders and HIV
CC   infection, and in patients undergoing organ transplantation. The BAFF-R
CC   proteins or BAFF-R specific antibodies may be used for treating,
CC   suppressing or altering an immune response involving a signalling pathway
CC   between BAFF-R and BAFF, thereby inhibiting inflammation. Since BAFF-R
CC   inhibits B-cell growth and maturation it is useful for treating diseases
CC   such as systemic lupus erythematosus, autoimmune haemolytic anaemia,
CC   Grave's disease, multiple myeloma, B-cell carcinomas, leukaemia, rapidly
CC   progressive glomerulonephritis, and lymphomas. Nucleic acids encoding
CC   human BAFF-R may be used in gene therapy to treat tumours, lymphomas,
CC   autoimmune disorders and inherited B-cell-associated disorders. The
CC   present sequence represents human BAFF-R.
XX
SQ   Sequence   184 AA;

  Query Match          100.0%;  Score 964;  DB 22;  Length 184;
  Best Local Similarity  100.0%;  Pred. No. 1.3e-95;
  Matches  184;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
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Db         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy        181 ISAR 184
              ||||
Db        181 ISAR 184


RESULT 6
AAY71979
ID   AAY71979 standard; Protein; 184 AA.
XX
AC   AAY71979;
XX
DT   28-MAR-2001  (first entry)
XX
DE   Human B cell maturation factor (BCMA) protein.
XX
KW   Human; Tumour Necrosis Factor; TNF; immunosuppressant; TALL-1;
KW   Tumour necrosis factor and ApoL-related Leucocyte expressed Ligand 1;
KW   therapy; autoimmune disorder; rheumatoid arthritis; multiple sclerosis;
KW   systemic lupus erythematosus; SLE; insulin dependent diabetes mellitus;
KW   thrombocytopenia purpura; acute rheumatic fever; Goodpasture's syndrome;
KW   haemolytic anaemia; Grave's disease; myasthenia gravis; chromosome 16;
KW   post-streptococcal glomerulonephritis; polyarteritis nodosa; BCMA;
KW   B cell maturation factor; pemphigus vulgaris; B-lymphocyte proliferation.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          1..62
FT                   /label= Extracellular_domain
XX
PN   WO200068378-A1.
XX
PD   16-NOV-2000.
XX
PF   05-MAY-2000; 2000WO-US12266.
XX
PR   06-MAY-1999;   99US-0132892.
PR   01-MAY-2000; 2000US-0201012.
XX
PA   (NAJE-) NAT JEWISH MEDICAL & RES CENT.
XX
PI   Shu HS;
XX
DR   WPI; 2001-016094/02.
DR   N-PSDB; AAD02125.
XX
PT   Isolated TALL-1 protein is used to identify compounds that regulate B
```

PT lymphocyte proliferation, used to treat B lymphocyte associated
PT autoimmune disorders -
XX
PS Claim 37; Page 104-105; 112pp; English.
XX
CC The present invention relates to Tumour necrosis factor (TNF) and
CC ApoL-related Leucocyte expressed Ligand 1 (TALL-1) nucleic acid
CC molecules, proteins (including homologues), and their antibodies. The
CC invention in particular relates to methods for regulating the
CC interaction between TALL-1 and TALL-1 receptors (BCMA referred as B cell
CC maturation factor) to regulate monocyte, macrophage and B lymphocyte
CC mediated immune responses. TALL-1 protein is useful for identifying
CC compounds that regulate B lymphocyte proliferation. It is also useful for
CC treating B lymphocyte associated autoimmune disorders like rheumatoid
CC arthritis, systemic lupus erythematosus (SLE), insulin dependent diabetes
CC mellitus, multiple sclerosis, myasthenia gravis, Grave's disease,
CC autoimmune haemolytic anaemia, autoimmune thrombocytopenia purpura,
CC Goodpasture's syndrome, pemphigus vulgaris, acute rheumatic fever,
CC post-streptococcal glomerulonephritis, or polyarteritis nodosa.
CC The TALL-1 protein and its corresponding nucleic acid sequence are also
CC useful in diagnostic assays.
CC The present sequence is a human B cell maturation factor (BCMA)
CC protein. It is the receptor for TALL-1 protein. BCMA gene is
CC located on chromosome 16. In human tissues, BCMA is expressed by
CC spleen and lymph nodes but not by brain, muscle, heart, lung, kidney,
CC pancreas, testis and placenta. BCMA mRNA is absent in the pro-B
CC lymphocyte stage but its expression increases with B lymphocyte
CC maturation.
XX
SQ Sequence 184 AA;

```
  Query Match             100.0%;  Score 964;  DB 22;  Length 184;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-95;
  Matches  184;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

          181 ISAR 184
              ||||
          181 ISAR 184
```

RESULT 7
ABB81487
ID ABB81487 standard; Protein; 184 AA.
XX
AC ABB81487;
XX
DT 02-SEP-2002 (first entry)
XX
DE Human BCMA receptor related protein SEQ ID NO:7.
XX
KW Human; Ztnfr12; tumour necrosis factor receptor; cytostatic;
KW immunosuppressive; dermatological; antiinflammatory; antidiabetic;
KW neuroprotective; antirheumatic; antiarthritic; antiasthmatic;
KW nephrotropic; hypotensive; gene therapy; B lymphocyte; tumour;
KW autoimmune disorder; systemic lupus erythematosus; myasthenia gravis;
KW multiple sclerosis; insulin dependent diabetes mellitus; asthma;
KW rheumatoid arthritis; bronchitis; emphysema; renal disease; lymphoma;
KW glomerulonephritis; vasculitis; chronic lymphoid leukaemia; nephritis;
KW pyelonephritis; renal neoplasm; multiple myeloma; amyloidosis;
KW light chain neuropathy; hypertension; large vessel disease;
KW graft-versus host disease; graft rejection; Crohn's disease.
XX
OS Homo sapiens.
XX
PN WO200238766-A2.
XX
PD 16-MAY-2002.
XX
PF 05-NOV-2001; 2001WO-US47018.
XX
PR 07-NOV-2000; 2000US-246449P.
PR 20-DEC-2000; 2000US-257131P.
PR 28-JUN-2001; 2001US-301715P.
PR 29-AUG-2001; 2001US-315565P.
XX
PA (ZYMO) ZYMOGENETICS INC.
XX
PI Gross JA, Xu W, Henne RM, Grant FJ;
XX
DR WPI; 2002-508212/54.
XX
PT Novel isolated human tumor necrosis factor receptor polypeptide, termed
PT Ztnfr 12, useful for treating autoimmune disorders, emphysema, end
PT stage renal failure or renal disease and lymphoma -
XX
PS Disclosure; Page 135-136; 154pp; English.
XX
CC The present invention describes a human tumour necrosis factor receptor
CC designated Ztnfr12 (I). (I) has cytostatic, immunosuppressive,
CC dermatological, antiinflammatory, neuroprotective, antidiabetic,
CC antirheumatic, antiarthritic, antiasthmatic, nephrotropic and hypotensive
CC activities, and can be used in gene therapy. (I) can be used for
CC inhibiting, in a mammal, the activity of a ligand that binds Ztnfr12
CC (e.g. ZTNF4), for treating disorders and diseases associated with B
CC lymphocytes, activated B lymphocytes or resting B lymphocytes, and for
CC inhibiting the proliferation of tumour cells. (I) is useful for treating
CC autoimmune disorders such as systemic lupus erythematosus, myasthenia
CC gravis, multiple sclerosis, insulin dependent diabetes mellitus, asthma,
CC rheumatoid arthritis, bronchitis, emphysema and end stage renal failure
CC or renal disease such as glomerulonephritis, vasculitis, chronic lymphoid
CC leukaemia, nephritis, and pyelonephritis, and for treating renal
CC neoplasms, multiple myelomas, lymphomas, light chain neuropathy, or
CC amyloidosis, hypertension, large vessel diseases, graft-versus host
CC disease, graft rejection and Crohn's disease. (I) is useful for
CC modulating the immune system, for regulating B cell responses and
CC development, for modulating development of other cells, antibody
CC production and cytokine production, and for modulating T and B cell
CC communication. The present sequence represents a protein which is
CC given in the exemplification of the present invention.
XX
SQ Sequence 184 AA;

```
  Query Match             100.0%;  Score 964;  DB 23;  Length 184;
  Best Local Similarity   100.0%;  Pred. No. 1.3e-95;
  Matches  184;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120

Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180

Qy        181 ISAR 184
              ||||
Db        181 ISAR 184
```

RESULT 8

```
AAE15484
ID   AAE15484 standard; Protein; 181 AA.
XX
AC   AAE15484;
XX
DT   12-MAR-2002  (first entry)
XX
DE   Human B-cell maturation (BCMA) protein.
XX
KW   Human; transmembrane activator and intracellular CAML interactor; TACI;
KW   cytostatic; B cell maturation protein; BCMA; tumour necrosis factor; TNF;
KW   lymphoproliferative disorder; tumour; lung; gastrointestinal; pancreatic;
KW   prostate; inflammation; immune disorder; diarrhoea; psoriasis; colitis;
KW   drug allergy; dermatitis; pneumonia; asthma; inflammatory bowel disease;
KW   Crohn's disease; scleroderma; autoimmune disease; multiple sclerosis;
KW   human immunodeficiency virus; HIV; systemic lupus erythematosus; cancer;
KW   rheumatoid arthritis; atherosclerosis.
XX
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Region          5..38
FT                   /note= "Cysteine-rich consensus region; This is region
FT                   is specifically claimed as SEQ ID NO: 7 in claim 1 of
FT                   the specification"
FT   Domain          52..72
FT                   /label= Transmembrane_domain
XX
PN   WO200187979-A2.
XX
PD   22-NOV-2001.
XX
PF   14-MAY-2001; 2001WO-US15567.
XX
PR   12-MAY-2000; 2000US-204039P.
PR   27-JUN-2000; 2000US-214591P.
PR   14-MAY-2001; 2001US-0214591.
XX
PA   (AMGE-) AMGEN INC.
XX
PI   Theill LE,  Yu G;
XX
DR   WPI; 2002-066686/09.
XX
PT   Inhibiting activity of B cell maturation protein and/or transmembrane
PT   activator and intracellular cyclophilin ligand interactor, by
PT   administering a binding partner for APRIL, a tumor necrosis factor
PT   family ligand  -
XX
PS   Disclosure; Fig 10A; 94pp; English.
XX
CC   The invention relates to a method for inhibiting TACI (transmembrane
CC   activator and intracellular CAML interactor) and/or B cell maturation
CC   protein (BCMA) activity in a mammal. The method comprises administering
CC   a specific binding partner for APRIL (G70, a tumour necrosis factor-TNF
CC   family ligand), having the consensus region of TACI, BCMA, or the TACI/
CC   BCMA extracellular consensus sequence, but not the extracellular region
CC   of TACI or BCMA. The method is useful for inhibiting activity of TACI
CC   and/or BCMA in a mammal which is useful for treating B-cell or T-cell
CC   lymphoproliferative disorders, one or more solid tumours such as lung,
CC   gastrointestinal, pancreatic or prostate tumour. APRIL, BCMA and TACI
CC   antagonists are useful for treating inflammation and immune function
CC   diseases such as diarrhoea, psoriasis, allergies, pneumonia, atopic
CC   dermatitis, respiratory allergic disease (asthma, hypersensitivity lung
CC   disease), drug and insect sting allergy, inflammatory bowel disease
CC   (Crohn's disease, colitis), scleroderma, autoimmune disease (multiple
CC   sclerosis, rheumatoid arthritis, systemic lupus erythematosus), fungal,
CC   bacterial, protozoal and viral infections (HIV), atherosclerosis, cancer
CC   with leucocyte infiltration of the skin or organs. The present sequence
CC   is human BCMA protein.
XX
SQ   Sequence   181 AA;
```

```
  Query Match          98.5%;  Score 950;  DB 23;  Length 181;
  Best Local Similarity   100.0%;  Pred. No. 4e-94;
  Matches  181;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          4 MAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLS 63
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 MAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLS 60

Qy         64 LIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLEYTV 123
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 LIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLEYTV 120

Qy        124 EECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKSISA 183
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 EECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKSISA 180

Qy        184 R 184
              |
Db        181 R 181
```

```
RESULT 9
AAB60700
ID   AAB60700 standard; Protein; 157 AA.
XX
AC   AAB60700;
XX
DT   22-MAY-2001  (first entry)
XX
DE   Human BAFF receptor (BAFF-R) sequence encoded by A plasmid pJST535.
XX
KW   Human BAFF-R; BAFF receptor; TNF family; immunoregulatory agent;
KW   immune-related disorder; B-cell growth inhibitor; BCMA;
KW   B-cell maturation inhibitor; immunoglobulin production inhibitor;
KW   autoimmune disorder; B-cell lymphoproliferative disorder; hypertension;
KW   renal disorder; immunosuppressive disorder; HIV infection;
KW   organ transplantation; antiinflammatory; systemic lupus erythematosus;
KW   autoimmune haemolytic anaemia; Grave's disease; multiple myeloma;
KW   B-cell carcinoma; leukaemia; rapidly progressive glomerulonephritis;
KW   lymphoma; gene therapy; cancer; tumour; plasmid pJST535.
XX
OS   Homo sapiens.
XX
PN   WO200112812-A2.
XX
PD   22-FEB-2001.
XX
PF   16-AUG-2000; 2000WO-US22507.
XX
PR   17-AUG-1999;   99US-0149378.
PR   11-FEB-2000; 2000US-0181684.
PR   18-FEB-2000; 2000US-0183536.
XX
PA   (BIOJ ) BIOGEN INC.
PA   (APOT-) APOTECH R & D SA.
XX
PI   MacKay F,  Browning J,  Ambrose C,  Tschopp J,  Schneider P;
PI   Thompson J;
XX
DR   WPI; 2001-202866/20.
DR   N-PSDB; AAF60000.
XX
PT   Inhibiting dendritic cell-induced B-cell growth, maturation and B-cell
PT   lympho-proliferative disorder by administering BAFF-receptor
PT   polypeptide, chimeric molecule comprising receptor or anti-BAFF-R
PT   antibody homolog  -
XX
PS   Example 1; Fig 3; 59pp; English.
XX
CC   The invention relates to the use of a BAFF receptor (BAFF-R, also known
CC   as BCMA) protein, or a BAFF-R fusion protein as an agent for the
CC   treatment of a variety of immune-related disorders. BAFF-R is a member of
CC   the TNF (tumour necrosis factor) family, acting as an immunoregulatory
```

```
CC   agent, and also plays a role in the development of hypertension and
CC   related disorders. BAFF-R, fusion proteins containing it, and BAFF-R-
CC   specific antibodies can be used for inhibiting B-cell growth, dendritic
CC   cell-induced B-cell growth and maturation, and immunoglobulin production,
CC   and in the treatment of autoimmune disorders, B-cell lymphoproliferative
CC   disorders, hypertension and renal disorders. The BAFF-R proteins may also
CC   be used in the treatment of immunosuppressive disorders and HIV
CC   infection, and in patients undergoing organ transplantation. The BAFF-R
CC   proteins or BAFF-R specific antibodies may be used for treating,
CC   suppressing or altering an immune response involving a signalling pathway
CC   between BAFF-R and BAFF, thereby inhibiting inflammation. Since BAFF-R
CC   inhibits B-cell growth and maturation it is useful for treating diseases
CC   such as systemic lupus erythematosus, autoimmune haemolytic anaemia,
CC   Grave's disease, multiple myeloma, B-cell carcinomas, leukaemia, rapidly
CC   progressive glomerulonephritis, and lymphomas. Nucleic acids encoding
CC   human BAFF-R may be used in gene therapy to treat tumours, lymphomas,
CC   autoimmune disorders and inherited B-cell-associated disorders. The
CC   present sequence represents a human BAFF-R protein sequence as encoded
CC   by plasmid PJST535. However, this BAFF-R protein sequence is 27 amino
CC   acids shorter than that given in AAB60698.
SQ   Sequence   157 AA;

  Query Match             74.6%;  Score 719.5;  DB 22;  Length 157;
  Best Local Similarity   85.3%;  Pred. No. 2.2e-69;
  Matches  157;  Conservative    0;  Mismatches    0;  Indels   27;  Gaps    9;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||  ||||||||||||||||||  ||||||||||||||||  |||||||||
Db          1 MLQMAG---QNEYFDSLLHACIPCQLR---NTPPLTCQRYCNASVTN---GTNAILWTCL 51

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
              |||||||  ||||||||||||||||||  ||||||||||||||||  |||||||||
Db         52 GLSLIIS---FVLMFLLRKISSEPLKD---NTGSGLLGMANIDLEKS---DEIILPRGLE 102

Qy        121 YTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCKSLPAALSATEIEKS 180
              |||||||  ||||||||||||||||||  ||||||||||||||||  |||||||||
Db        103 YTVEECT---CIKSKPKVDSDHCFPLP---EGATILVTTKTNDYCKS---ALSATEIEKS 153

Qy        181 ISAR 184
              ||||
Db        154 ISAR 157


RESULT 10
AAB08844
ID   AAB08844 standard; peptide; 185 AA.

     AAB08844;

DT   02-JAN-2001  (first entry)
XX
DE   Amino acid sequence of murine BCMA polypeptide.
XX
KW   BCMA; necrosis factor-kB activator; NF-kB; gene expression; cancer;
KW   anti-cell death gene; apoptosis; viral infection; inflammatory response;
KW   rheumatoid arthritis; inflammatory bowel disease; septic shock.
XX
OS   Mus musculus.
XX
FH   Key             Location/Qualifiers
FT   Domain          47..72
FT                   /note= "putative transmembrane domain"
XX
PN   WO200050633-A1.
XX
PD   31-AUG-2000.
XX
PF   24-FEB-2000; 2000WO-US04925.
XX
PR   24-FEB-1999;   99US-0121485.
XX
PA   (GEHO ) GEN HOSPITAL CORP.
XX
PI   Seed B,  Ting A;
XX
DR   WPI; 2000-558405/51.
XX
PT   Identifying a modulator of gene expression for drug designing, by
PT   contacting a compound library with a cell expressing an anti-cell death
PT   gene and reporter gene, and determining alteration in reporter gene
PT   expression -
XX
PS   Claim 32; Fig 7B; 53pp; English.
XX
CC   The present sequence represents a BCMA (not defined) polypeptide. BCMA
CC   is a necrosis factor (NF)-kB activator. The method of the invention is
CC   used to identify compounds which modulate BCMA activity (and thus NF-kB
CC   activity). The specification describes a method of identifying a
CC   polypeptide which increases gene expression from a promoter. The method
CC   involves contacting a library of with a cell which expresses a
CC   recombinant anti-cell death gene and a reporter gene operably linked to
CC   the promoter, and then determining whether the expression of the
CC   reporter gene is altered as a result of contact with library. The method
CC   is useful for identifying polypeptides which increase or decrease gene
CC   expression from a promoter. The BCMA polypeptide or nucleic acid are
CC   useful for preparing a pharmaceutical composition for treating cancer,
CC   apoptosis, viral infections, inflammatory response, such as rheumatoid
CC   arthritis, inflammatory bowel disease or septic shock. BCMA is useful for
CC   identifying compounds that modulate NF-kB expression and thus for drug
CC   designing.
XX
SQ   Sequence   185 AA;

  Query Match             59.3%;  Score 572;  DB 21;  Length 185;
  Best Local Similarity   62.6%;  Pred. No. 2.1e-53;
  Matches  117;  Conservative   21;  Mismatches   41;  Indels    8;  Gaps    4;

Qy          4 MAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLS 63
              ||  ||  :||||||||||  ||  ||||:  ||  |||  ||: |||:|||||  :||  |||:
Db          1 MAQQCFHSEYFDSLLHACKPCHLRCSN--PPATCQPYCDPSVTSSVKGTYTVLWIFLGLT 58

Qy         64 LIISLAVFVLMFLLRKISSEPLKDEFKN----TGSGLLGMANIDLEKSRTGDEIILPRGL 119
              |::|||:|  :  |||||::  |  ||||  ::      ||  |   |: :|  :  |  ||: |  || |
Db         59 LVLSLALFTISFLLRKMNPEALKDEPQSPGQLDGSAQLDKADTELTRIRAGDDRIFPRSL 118

Qy        120 EYTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCK-SLPAAL-SATEI 177
              ||||||||||||:|||||  ||||  ||||||||||||||||||  ||  |  |:|  ||  |    :
Db        119 EYTVEECTCEDCVKSKPKGDSDHFFPLPAMEEGATILVTTKTGDYGKSSVPTALQSVMGM 178

Qy        178 EKSISAR 184
              ||    |
Db        179 EKPTHTR 185


RESULT 11
AAY71980
ID   AAY71980 standard; Protein; 185 AA.
XX
AC   AAY71980;
XX
DT   28-MAR-2001  (first entry)
XX
DE   Murine B cell maturation factor (BCMA) protein.
XX
KW   Murine; Tumour Necrosis Factor; TNF; immunosuppressant; TALL-1;
KW   Tumour necrosis factor and ApoL-related Leucocyte expressed Ligand 1;
KW   therapy; autoimmune disorder; rheumatoid arthritis; multiple sclerosis;
KW   systemic lupus erythematosus; SLE; insulin dependent diabetes mellitus;
KW   thrombocytopenia purpura; acute rheumatic fever; Goodpasture's syndrome;
KW   haemolytic anaemia; Grave's disease; myasthenia gravis; BCMA;
KW   B cell maturation factor; pemphigus vulgaris; B-lymphocyte proliferation;
KW   post-streptococcal glomerulonephritis; polyarteritis nodosa.
XX
OS   Mus musculus.
XX
```

PN WO200068378-A1.
XX
PD 16-NOV-2000.
XX
PF 05-MAY-2000; 2000WO-US12266.
XX
PR 06-MAY-1999; 99US-0132892.
PR 01-MAY-2000; 2000US-0201012.
XX
PA (NAJE-) NAT JEWISH MEDICAL & RES CENT.
XX
PI Shu HS;
XX
DR WPI; 2001-016094/02.
DR N-PSDB; AAD02130.
XX
PT Isolated TALL-1 protein is used to identify compounds that regulate B
PT lymphocyte proliferation, used to treat B lymphocyte associated
PT autoimmune disorders -
XX
Claim 37; Page 107-108; 112pp; English.

CC The present invention relates to Tumour necrosis factor (TNF) and
CC ApoL-related Leucocyte expressed Ligand 1 (TALL-1) nucleic acid
CC molecules, proteins (including homologues), and their antibodies. The
CC invention in particular relates to methods for regulating the
CC interaction between TALL-1 and TALL-1 receptors (BCMA referred as B cell
CC maturation factor) to regulate monocyte, macrophage and B lymphocyte
CC mediated immune responses. TALL-1 protein is useful for identifying
CC compounds that regulate B lymphocyte proliferation. It is also useful for
CC treating B lymphocyte associated autoimmune disorders like rheumatoid
CC arthritis, systemic lupus erythematosus (SLE), insulin dependent diabetes
CC mellitus, multiple sclerosis, myasthenia gravis, Grave's disease,
CC autoimmune haemolytic anaemia, autoimmune thrombocytopenia purpura,
CC Goodpasture's syndrome, pemphigus vulgaris, acute rheumatic fever,
CC post-streptococcal glomerulonephritis, or polyarteritis nodosa.
CC The TALL-1 protein and its corresponding nucleic acid sequence are also
CC useful in diagnostic assays.
CC The present sequence is a murine B cell maturation factor (BCMA).
CC BCMA is the receptor for TALL-1 protein.
XX
SQ Sequence 185 AA;

Query Match 59.3%; Score 572; DB 22; Length 185;
Best Local Similarity 62.6%; Pred. No. 2.1e-53;
Matches 117; Conservative 21; Mismatches 41; Indels 8; Gaps 4;

```
Qy          4 MAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLS 63
              || ||  :|||||||||| || ||||:  || ||| ||: |||:|||||  :||  |||:
Db          1 MAQQCFHSEYFDSLLHACKPCHLRCSN--PPATCQPYCDPSVTSSVKGTYTVLWIFLGLT 58

Qy         64 LIISLAVFVLMFLLRKISSEPLKDEFKN----TGSGLLGMANIDLEKSRTGDEIILPRGL 119
              |::|||:| : |||||:: | |||| ::     ||  |  |: :| : | ||: | || |
Db         59 LVLSLALFTISFLLRKMNPEALKDEPQSPGQLDGSAQLDKADTELTRIRAGDDRIFPRSL 118

Qy        120 EYTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCK-SLPAAL-SATEI 177
              ||||||||||||:|||| |||| ||||||||||||||||| || | |:| || |   :
Db        119 EYTVEECTCEDCVKSKPKGDSDHFFPLPAMEEGATILVTTKTGDYGKSSVPTALQSVMGM 178

Qy        178 EKSISAR 184
              ||   |
Db        179 EKPTHTR 185
```

RESULT 12
AAE15490
ID AAE15490 standard; Protein; 185 AA.
XX
AC AAE15490;
XX
DT 12-MAR-2002 (first entry)
XX
DE Mouse B cell maturation (BCMA) protein.
XX
KW Mouse; transmembrane activator and intracellular CAML interactor; TACI;
KW cytostatic; B cell maturation protein; BCMA; tumour necrosis factor; TNF;
KW lymphoproliferative disorder; tumour; lung; gastrointestinal; pancreatic;
KW prostate; inflammation; immune disorder; diarrhoea; psoriasis; colitis;
KW drug allergy; dermatitis; pneumonia; asthma; inflammatory bowel disease;
KW Crohn's disease; scleroderma; autoimmune disease; multiple sclerosis;
KW human immunodeficiency virus; HIV; systemic lupus erythematosus; cancer;
KW rheumatoid arthritis; atherosclerosis.
XX
OS Mus sp.
XX
PN WO200187979-A2.
XX
PD 22-NOV-2001.
XX
PF 14-MAY-2001; 2001WO-US15567.
XX
PR 12-MAY-2000; 2000US-204039P.
PR 27-JUN-2000; 2000US-214591P.
PR 14-MAY-2001; 2001US-0214591.
XX
PA (AMGE-) AMGEN INC.
XX
PI Theill LE, Yu G;
XX
DR WPI; 2002-066686/09.
XX
PT Inhibiting activity of B cell maturation protein and/or transmembrane
PT activator and intracellular cyclophilin ligand interactor, by
PT administering a binding partner for APRIL, a tumor necrosis factor
PT family ligand -
XX
PS Disclosure; Fig 11; 94pp; English.
XX
CC The invention relates to a method for inhibiting TACI (transmembrane
CC activator and intracellular CAML interactor) and/or B cell maturation
CC protein (BCMA) activity in a mammal. The method comprises administering
CC a specific binding partner for APRIL (G70, a tumour necrosis factor-TNF
CC family ligand), having the consensus region of TACI, BCMA, or the TACI/
CC BCMA extracellular consensus sequence, but not the extracellular region
CC of TACI or BCMA. The method is useful for inhibiting activity of TACI
CC and/or BCMA in a mammal which is useful for treating B-cell or T-cell
CC lymphoproliferative disorders, one or more solid tumours such as lung,
CC gastrointestinal, pancreatic or prostate tumour. APRIL, BCMA and TACI
CC antagonists are useful for treating inflammation and immune function
CC diseases such as diarrhoea, psoriasis, allergies, pneumonia, atopic
CC dermatitis, respiratory allergic disease (asthma, hypersensitivity lung
CC disease), drug and insect sting allergy, inflammatory bowel disease
CC (Crohn's disease, colitis), scleroderma, autoimmune disease (multiple
CC sclerosis, rheumatoid arthritis, systemic lupus erythematosus), fungal,
CC bacterial, protozoal and viral infections (HIV), atherosclerosis, cancer
CC with leucocyte infiltration of the skin or organs. The present sequence
CC is mouse BCMA protein.
XX
SQ Sequence 185 AA;

Query Match 59.3%; Score 572; DB 23; Length 185;
Best Local Similarity 62.6%; Pred. No. 2.1e-53;
Matches 117; Conservative 21; Mismatches 41; Indels 8; Gaps 4;

```
Qy          4 MAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLS 63
              || ||  :|||||||||| || ||||:  || ||| ||: |||:|||||  :||  |||:
Db          1 MAQQCFHSEYFDSLLHACKPCHLRCSN--PPATCQPYCDPSVTSSVKGTYTVLWIFLGLT 58

Qy         64 LIISLAVFVLMFLLRKISSEPLKDEFKN----TGSGLLGMANIDLEKSRTGDEIILPRGL 119
              |::|||:| : |||||:: | |||| ::     ||  |  |: :| : | ||: | || |
Db         59 LVLSLALFTISFLLRKMNPEALKDEPQSPGQLDGSAQLDKADTELTRIRAGDDRIFPRSL 118

Qy        120 EYTVEECTCEDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDYCK-SLPAAL-SATEI 177
              ||||||||||||:|||| |||| ||||||||||||||||| || | |:| || |   :
Db        119 EYTVEECTCEDCVKSKPKGDSDHFFPLPAMEEGATILVTTKTGDYGKSSVPTALQSVMGM 178
```

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Qy        178 EKSISAR 184
              ||   |
Db        179 EKPTHTR 185
```

RESULT 13
AAE15501
ID AAE15501 standard; peptide; 58 AA.
XX
AC AAE15501;
XX
DT 12-MAR-2002 (first entry)
XX
DE Human B cell maturation protein cysteine rich extracellular region.
XX
KW Human; transmembrane activator and intracellular CAML interactor; TACI;
KW cytostatic; B cell maturation protein; BCMA; tumour necrosis factor; TNF;
KW lymphoproliferative disorder; tumour; lung; gastrointestinal; pancreatic;
KW prostate; inflammation; immune disorder; diarrhoea; psoriasis; colitis;
KW drug allergy; dermatitis; pneumonia; asthma; inflammatory bowel disease;
KW Crohn's disease; scleroderma; autoimmune disease; multiple sclerosis;
KW human immunodeficiency virus; HIV; systemic lupus erythematosus; cancer;
KW rheumatoid arthritis; atherosclerosis.
XX
OS Homo sapiens.
XX
PN WO200187979-A2.
XX
PD 22-NOV-2001.
XX
PF 14-MAY-2001; 2001WO-US15567.
XX
PR 12-MAY-2000; 2000US-204039P.
PR 27-JUN-2000; 2000US-214591P.
PR 14-MAY-2001; 2001US-0214591.
XX
PA (AMGE-) AMGEN INC.
XX
PI Theill LE, Yu G;
XX
DR WPI; 2002-066686/09.
XX
PT Inhibiting activity of B cell maturation protein and/or transmembrane
PT activator and intracellular cyclophilin ligand interactor, by
PT administering a binding partner for APRIL, a tumor necrosis factor
PT family ligand -
XX
PS Disclosure; Fig 13; 94pp; English.
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CC activator and intracellular CAML interactor) and/or B cell maturation
CC protein (BCMA) activity in a mammal. The method comprises administering
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CC family ligand), having the consensus region of TACI, BCMA, or the TACI/
CC BCMA extracellular consensus sequence, but not the extracellular region
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CC dermatitis, respiratory allergic disease (asthma, hypersensitivity lung
CC disease), drug and insect sting allergy, inflammatory bowel disease
CC (Crohn's disease, colitis), scleroderma, autoimmune disease (multiple
CC sclerosis, rheumatoid arthritis, systemic lupus erythematosus), fungal,
CC bacterial, protozoal and viral infections (HIV), atherosclerosis, cancer
CC with leucocyte infiltration of the skin or organs. The present sequence
CC is human BCMA cysteine-rich extracellular region.
XX
SQ Sequence 58 AA;

```
  Query Match             33.5%;  Score 323;  DB 23;  Length 58;
  Best Local Similarity   100.0%;  Pred. No. 3e-27;
  Matches   58;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy          8 CSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLSLI 65
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db          1 CSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLSLI 58
```

RESULT 14
AAE15491
ID AAE15491 standard; Protein; 117 AA.
XX
AC AAE15491;
XX
DT 12-MAR-2002 (first entry)
XX
DE Human-murine B cell maturation protein (BCMA) consensus sequence.
XX
KW Human; transmembrane activator and intracellular CAML interactor; TACI;
KW cytostatic; B cell maturation protein; BCMA; tumour necrosis factor; TNF;
KW lymphoproliferative disorder; tumour; lung; gastrointestinal; pancreatic;
KW prostate; inflammation; immune disorder; diarrhoea; psoriasis; colitis;
KW drug allergy; dermatitis; pneumonia; asthma; inflammatory bowel disease;
KW Crohn's disease; scleroderma; autoimmune disease; multiple sclerosis;
KW human immunodeficiency virus; HIV; systemic lupus erythematosus; cancer;
KW rheumatoid arthritis; atherosclerosis; mouse.
XX
OS Chimeric - Homo sapiens.
OS Chimeric - Mus sp.
XX
PN WO200187979-A2.
XX
PD 22-NOV-2001.
XX
PF 14-MAY-2001; 2001WO-US15567.
XX
PR 12-MAY-2000; 2000US-204039P.
PR 27-JUN-2000; 2000US-214591P.
PR 14-MAY-2001; 2001US-0214591.
XX
PA (AMGE-) AMGEN INC.
XX
PI Theill LE, Yu G;
XX
DR WPI; 2002-066686/09.
XX
PT Inhibiting activity of B cell maturation protein and/or transmembrane
PT activator and intracellular cyclophilin ligand interactor, by
PT administering a binding partner for APRIL, a tumor necrosis factor
PT family ligand -
XX
PS Disclosure; Fig 11; 94pp; English.
XX
CC The invention relates to a method for inhibiting TACI (transmembrane
CC activator and intracellular CAML interactor) and/or B cell maturation
CC protein (BCMA) activity in a mammal. The method comprises administering
CC a specific binding partner for APRIL (G70, a tumour necrosis factor-TNF
CC family ligand), having the consensus region of TACI, BCMA, or the TACI/
CC BCMA extracellular consensus sequence, but not the extracellular region
CC of TACI or BCMA. The method is useful for inhibiting activity of TACI
CC and/or BCMA in a mammal which is useful for treating B-cell or T-cell
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CC gastrointestinal, pancreatic or prostate tumour. APRIL, BCMA and TACI
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CC diseases such as diarrhoea, psoriasis, allergies, pneumonia, atopic
CC dermatitis, respiratory allergic disease (asthma, hypersensitivity lung
CC disease), drug and insect sting allergy, inflammatory bowel disease
CC (Crohn's disease, colitis), scleroderma, autoimmune disease (multiple
CC sclerosis, rheumatoid arthritis, systemic lupus erythematosus), fungal,
CC bacterial, protozoal and viral infections (HIV), atherosclerosis, cancer
CC with leucocyte infiltration of the skin or organs. The present sequence
CC is human-murine B cell maturation protein (BCMA) consensus sequence.
XX
SQ Sequence 117 AA;

```
  Query Match             32.3%; .Score 311.5;  DB 23;  Length 117;
  Best Local Similarity   61.5%;  Pred. No. 1.3e-25;
  Matches   96;  Conservative    4;  Mismatches    7;  Indels   49;  Gaps   19;

Qy          9 SQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCLGLSLIISL 68
              :| |||||||||| || ||||    | ||| ||  ||| |||||   ||  |||   :||
Db          2 AQCEYFDSLLHAC-PC-LRCS----PPTCQ-YC--SVT-SVKGT---LW--LGL---LSL 43

Qy         69 AVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLEYTVEECTC 128
              |     |||||     ||||      | | :          ||   :|| ||||||||||
Db         44 A----FFLLRK----ELKDE------GSLAL---------RGD---IPR-LEYTVEECTC 76

Qy        129 EDCIKSKPKVDSDHCFPLPAMEEGATILVTTKTNDY 164
              ||| ||||| |||| ||||||||||||||||||| ||
Db         77 EDC-KSKPK-DSDH-FPLPAMEEGATILVTTKT-DY 108


RESULT 15
AAE00507
ID   AAE00507 standard; Protein; 302 AA.
XX
AC   AAE00507;
XX
DT   31-JUL-2001  (first entry)
XX
DE   Human BCMA-Immunoglobulin G Fc region fusion construct.
XX
KW   Human; A Proliferation Inducing Ligand Receptor; APRIL-R; cytostatic;
KW   gene therapy; cancer; nephrotropic; renal disorder; autoimmune disease;
KW   carcinoma; lung; colon; breast; prostate; Grave's disease; hypertension;
KW   systemic lupus erythematosus; SLE; inflammation; cardiovascular disease;
KW   B-cell lympho-proliferative disorder; BCM; immunosuppressive disease;
KW   organ transplantation; HIV; human immunodeficiency virus; TNF; murine;
KW   tumour necrosis factor; B cell maturation protein; BCMA; fusion protein;
KW   immunoglobulin G; IgG; Fc region.
XX
OS   Chimeric - Homo sapiens.
OS   Chimeric - Mus sp.
XX
FH   Key             Location/Qualifiers
FT   Protein         1..22
FT                   /label= Signal_peptide
FT                   /note= "Derived from murine Ig kappa sequence"
FT   Protein         23..302
FT                   /label= Mature_human_BCMA_IgG_Fc_fusion_protein
FT   Region          23..75
FT                   /note= "Derived from human BCMA protein"
FT   Region          76..302
FT                   /note= "Derived from human IgG Fc region"
FT   Domain          24..302
FT                   /label= Cysteine_rich_domain
FT                   /note= "Derived from human BCMA"
XX
PN   WO200124811-A1.
XX
PD   12-APR-2001.
XX
PF   05-OCT-2000; 2000WO-US27579.
XX
PR   06-OCT-1999;   99US-0157933.
PR   11-FEB-2000; 2000US-0181807.
PR   30-JUN-2000; 2000US-0215688.
XX
PA   (BIOJ ) BIOGEN INC.
PA   (APOT-) APOTECH R & D SA.
XX
PI   Schneider P,  Thompson J,  Cachero T,  Ambrose C,  Rennert P;
XX
DR   WPI; 2001-266242/27.
DR   N-PSDB; AAD03847.
XX
PT   Treating a mammal for a condition associated with undesired cell
PT   proliferation such as cancer or carcinoma, comprises administering a
PT   composition comprising A Proliferation Inducing Ligand Receptor
PT   (APRIL-R) antagonist  -
XX
PS   Example 1; Fig 3B; 85pp; English.
XX
CC   The invention relates to a method of treating a mammal for a condition
CC   associated with undesired cell proliferation such as cancer or
CC   carcinoma. The method involves administering a composition comprising
CC   A Proliferation Inducing Ligand Receptor (APRIL-R) also referred as
CC   B cell maturation protein (BCM or BCMA) antagonist that antagonises the
CC   interaction between APRIL and its cognate receptor(s). This method is
CC   useful for treating undesired cell proliferation such as cancer or
CC   carcinoma e.g. human lung carcinoma, colon carcinoma, breast carcinoma,
CC   prostate carcinoma, and other carcinomas whose proliferation is modulated
CC   by APRIL. It is also useful for treating autoimmune diseases (Grave's
CC   disease, systemic lupus erythematosus-SLE); hypertension, cardiovascular
CC   diseases, renal disorders, B-cell lympho-proliferative disorders,
CC   immunosuppressive diseases, organ transplantation, inflammation and
CC   human immunodeficiency virus (HIV), and for treating, suppressing or
CC   altering an immune response involving a signalling pathway between
CC   APRIL-R and its ligand. APRIL-R DNA is also useful in gene therapy.
CC   The present sequence is a fusion construct containing human APRIL-R
CC   also referred as BCMA or BCM protein, Fc region of human immunoglobulin
CC   G (IgG) and a signal sequence from murine Ig kappa cDNA.
XX
SQ   Sequence   302 AA;

  Query Match             29.7%;  Score 286.5;  DB 22;  Length 302;
  Best Local Similarity   39.9%;  Pred. No. 2.3e-22;
  Matches   81;  Conservative   13;  Mismatches   54;  Indels   55;  Gaps    8;

Qy          1 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGTNAILWTCL 60
              ||||||||||||||||||||||||||||||||||||||||||||||||||||| :  ||
Db         24 MLQMAGQCSQNEYFDSLLHACIPCQLRCSSNTPPLTCQRYCNASVTNSVKGVDK-THTC- 81

Qy         61 GLSLIISLAVFVLMFLLRKISSEPLKDEFKNTGSGLLGMANIDLEKSRTGDEIILPRGLE 120
                                          |          |||  :: |   :  | ::: |  |
Db         82 ----------------------PPC------PAPELLGGPSVFLFPPKPKDTLMISRTPE 113

Qy        121 YTVEECTCEDCIKSKPKVDSD--------HCFPLPAMEE------GATILVTTKTNDY-- 164
                |   |   |     |:|  :  .      |        ||          ::|    |:
Db        114 VT---CVVVDVSHEDPEVKFNWYVDGVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLN 170

Qy        165 -----CKSLPAALSATEIEKSIS 182
                   ||    || |  |||:||
Db        171 GKEYKCKVSNKALPA-PIEKTIS 192


Search completed: June 23, 2003, 08:36:19
Job time : 92.3073 secs
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